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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/846,449

04/30/2001

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3997P005

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11/01/2004

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EXAMINER

HSU, ALPUS

ART UNIT

PAPER NUMBER

2665

DATE MAILED: 11/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/846,449

Applicant(s)

WEN ET AL.

Examiner

Alpus H. Hsu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 17-20 is/are rejected.
- 7) ☒ Claim(s) 16 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 5, 6, 9-15 are rejected under 35 U.S.C. 102(e) as being anticipated by SENARATH et al. in U.S. Patent No. 6,778,499.

Referring to claim 1, SENARATH et al. discloses a method for controlling packet loss within a congested network by setting packet bandwidth over selected communication links within the network at one or more control points, providing the packet bandwidth being set at critical values determined by monitoring congestion on one or more communication links of the network downstream from the control point (col. 2, lines 40-52, col. 3, lines 14-23).

Referring to claims 2 and 3, SENARATH et al. discloses that the critical values are determined according to buffer occupancy levels at the control points and according to a periodic sweep (col. 2, lines 42-43, col. 3, lines 18-19).

Referring to claim 5, SENARATH et al. discloses that the packet bandwidths are set by varying an inter-packet delay time over the selected communication links at the control points (col. 8, lines 17-25, 42-59).

Referring to claim 6, SENARATH et al. discloses a method, comprising monitoring buffer occupancy level at a control node of a network as present output rate from the control node is decreased (col. 2, lines 40-52, col. 3, lines 14-23), and setting the packet output rate at a

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value corresponding to a phase transition point in the buffer occupancy level (col. 5, lines 49-53, col. 6, lines 27-30).

Referring to claim 9, SENARATH et al. discloses the step of periodically determining whether the phase transition point has changed reliable to the packet output rate and resetting the packet output rate accordingly (col. 5, lines 49-53).

Referring to claim 10, SENARATH et al. discloses that the phase transition point corresponding to a change in buffer occupancy from a normal level to a level at or near a maximum buffer occupancy (col. 6, line 49 to col. 7, line 7).

Referring to claim 11, SENARATH et al. discloses a method, comprising setting an inter-packet transmission time for a control node in a network according to a buffer occupancy levels in the control node (col. 2, lines 40-52, col. 3, lines 14-23, col. 8, lines 42-59).

Referring to claims 12 and 14, SENARATH et al. discloses that the inter-packet transmission time is set to a point corresponding to a phase transition in the buffer occupancy levels (col. 5, lines 49-53, col. 6, lines 27-30).

Referring to claim 13, SENARATH et al. discloses that the phase transition corresponds to a change in buffer occupancy from a normal level to a level at or near a maximum buffer occupancy (col. 6, line 49 to col. 7, line 7).

Referring to claim 15, SENARATH et al. discloses that the phase transition point is determined by monitoring the buffer occupancy level for variable inter-packet transmission times (col. 5, lines 49-53, col. 6, lines 27-30).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 4, 8, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over SENARATH et al. in U.S. Patent No. 6,778,499 in view of HOYT et al. in U.S. Patent No. 6,403,947.

Referring to claims 4, 8, 17 and 18, SENARATH et al. differs from the claims, in that, SENARATH et al. fails to disclose the use of monotonically decreasing function for performing the periodic sweep or decreasing the packet output rate or varying the inter-packet transmission times, which is well known in the art and within the level of ordinary skill in the art to implement into the system of SENARATH et al. for conforming the requirement of desired method steps. HOYT et al., for example, teaches the use of monotonically decreasing function (col. 11, lines 14-17, claims 8 and 14), which would have been obvious to one of ordinary skill in the art to

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adopt into the system of SENARATH et al. for conforming the requirement of desired method steps to improve the system compatibility.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over SENARATH et al. in U.S. Patent No. 6,778,499 in view of BONNEAU in U.S. Patent No. 6,671,258.

Referring to claim 7, SENARATH et al. differs from the claim, in that, SENARATH et al. fails to disclose the use of decaying exponential function for decreasing the packet output rate, which is also well known in the art and within the level of ordinary skill in the art to implement into the system of SENARATH et al. for conforming the requirement of desired method step. BONNEAU, for example, teaches the use of decaying exponential function (col. 16, lines 37-47), which would have been obvious to one of ordinary skill in the art to adopt into the system of SENARATH et al. for conforming the requirement of desired method step to improve the system compatibility.

7. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over SENARATH et al. in U.S. Patent No. 6,778,499 in view of HOYT et al. in U.S. Patent No. 6,403,947 as applied to claims 17 and 18 above, and further in view of BONNEAU in U.S. Patent No. 6,671,258.

Referring to claims 19 and 20, SENARATH et al. in view of HOYT et al. differs from the claims, in that, SENARATH et al. in view of HOYT et al. fails to disclose the use of exponential function for decreasing the packet output rate, which is also well known in the art and within the level of ordinary skill in the art to implement into the system of SENARATH et al. in view of HOYT et al. for conforming the requirement of desired method step. BONNEAU, for example, teaches the use of decaying exponential function (col. 16, lines 37-47), which would have been

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obvious to one of ordinary skill in the art to adopt into the system of SENARATH et al. in view of HOYT et al. for conforming the requirement of desired method step to improve the system compatibility.

Allowable Subject Matter

8. Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kilkki et al. '843, '030 & '514, Lyon et al. and Duong-van et al. are all cited to show the common feature of data flow or congestion control in communication network utilizing buffer-based traffic measurement similar to the claimed invention.


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alpus H. Hsu whose telephone number is (571)272-3146. The examiner can normally be reached on M-F (5:30-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D. Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AHH



Alpus H. Hsu
Primary Examiner
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